UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April, 18, 2013

David Gaskin
Deputy Administrator
Division of Environmental Protection
901 S. Stewart Street, Suite 4001
Carson City, Nevada 89701

Dear Mr. Gaskin:

I am hereby transmitting to you the final list of water bodies that EPA is adding to Nevada's 2008-2010 list of water quality limited segments still requiring total maximum daily loads pursuant to Clean Water Act section 303(d), and 40 CFR 130.7(d)(2).

On February 1, 2013, EPA took action on Nevada's 2008-2010 Section 303(d) List, approving the State's inclusion of all waters and pollutants that the State identified as requiring a total maximum daily load (TMDL) and disapproving the State's omission of several water body-pollutant combinations that met federal listing requirements.

EPA provided public notice and solicited public comment on its identification of water body-pollutant combinations for inclusion on Nevada's List. The enclosure summarizes comments received and provides EPA's response, and Table 1 of the enclosure identifies the final list of water body-pollutant combinations added by EPA. The final list of water bodies that EPA is adding to Nevada's list of water quality limited segments still requiring a TMDL includes all the water bodies and associated pollutants identified in EPA's February 1, 2013 letter, with minor modifications to the waterbody ID's for Jakes Creek Reservoir (to NV03-SR-53_01) and Overland Lake (to NV10-CE-76_01).

If you have questions on any aspect of this final listing decision, please call me at (213) 244-1832, or refer staff to Susan Keydel at (415) 972-3106.

Sincerely yours,

John Kemmerer
Acting Director, Water Division

Enclosures

cc: Colleen Cripps, PhD., Administrator, NDEP
Kathy Sertic, Bureau Chief, Water Quality Planning
John Heggeness, Branch Supervisor, Water Quality Standards & Monitoring

Enclosure

EPA Decision Concerning Nevada's 2008-2010 Clean Water Act Section 303(d) List Responsiveness Summary and Final List of water bodies added to Nevada's list of water quality limited segments still requiring a TMDL

Introduction

On February 1, 2013, EPA took action on Nevada's 2008-2010 Section 303(d) List, approving the State's inclusion of all waters and pollutants that the State identified as requiring a total maximum daily load (TMDL) and disapproving the State's omission of several water bodies that exceeded federal criteria for mercury in fish tissue. The water bodies and associated pollutants that EPA added to the State's 2008-2010 list of water quality limited segments requiring a TMDL were identified in Table 1 of the enclosure to EPA's February 1, 2013 letter.

On February 4, 2013, EPA began the public comment period on its action to add 19 water body pollutant listings to the NV 2008-2010 303(d) list. EPA solicited public comment and provided notice of availability by posting EPA's public notice document on the EPA Region IX website; additionally EPA's public notice document was sent to all recipients on NDEP's email list used to notice Bureau of Water Quality Planning actions. EPA's comment period, 35 days long, closed on March 11, 2013.

Written comments were only received from Nevada Division of Environmental Protection (NDEP). EPA's responses to NDEP's comments are presented below.

NDEP Comment:
"NDEP strongly opposes EPA's action. Nevada's 2008-10 IR as submitted to EPA in December 2012 meets all federal 303(d) listing requirements contained in 40 CFR 130.7. NDEP's 303(d) List waters were determined by evaluation of State adopted and EPA approved water quality standards established under section 303 of the Clean Water Act and other considerations including health advisories issued by the Nevada State Health Division (NSHD) and Superfund designations. The NSHD fish consumption advisories are based on the U.S. Food and Drug Administration fish tissue mercury action level of 1.0 mg methyl mercury/kg, not the EPA criterion of 0.3 mg methyl mercury/kg."

"NDEP is under no legal obligation to use the EPA 'recommended' criterion. The methyl mercury fish tissue criterion Fact Sheet (January 2001) states: 'EPA's recommended human health water quality criteria are not regulation themselves, and do not impose legally binding requirements.' Further, EPA indicates the water quality criteria recommendations are intended as guidance to States in developing water quality standards (Federal Register Notice January 8, 2001). As Nevada (or EPA acting for Nevada) has not officially adopted fish tissue criteria, EPA has no authority to impose the "recommended" criteria on Nevada. Nevada's 2008-10 303(d) List meets all federal listing requirements. It is not appropriate for EPA to add waters to Nevada's 303(d) List based on the 2001 'recommended' criterion."

EPA Response:

EPA concludes that the water body-pollutant pairs added to Nevada's list of waters for which a TMDL is required meet the Federal criteria for listing under 40 CFR 130.7. EPA has determined that, for each of the waters added, the narrative water quality standard for toxicity established by NAC 445A.121 is not being implemented. EPA does not agree that it improperly applied the water quality criterion for the protection of human health for methyl mercury when making that determination.

1. *Use of the EPA 'recommended' criterion*

CWA section 303(c)(1) provides that states and authorized tribes review their water quality standards at least every three years. At such time, states and authorized tribes are to adopt numeric criteria for all toxic pollutants for which EPA has published criteria under CWA section 304(a), where the discharge or presence of these pollutants could reasonably interfere with designated uses, under the conditions set forth in CWA section 303(c)(2)(B).

Mercury and related compounds are identified as toxic pollutants in EPA regulations (40 CFR 401.15). EPA's water quality criterion for methyl mercury, published in January 2001 under CWA section 304(a), is expressed as a fish tissue concentration value set at 0.3 milligram methyl mercury per kilogram of wet-weight fish tissue, or 0.3 mg/kg. As explained in Water Quality Criterion for the Protection of Human Health: Methylmercury. Final. EPA-823-R-01-001 (2001b), this criterion represents the concentration of methyl mercury in freshwater and estuarine fish and shellfish tissue that should not be exceeded based on a consumption rate of 0.0175 kg fish/day, and derived using inputs designed to protect consumers of fish and shellfish among the general population. See, e.g. EPA-823-R-01-001, at pp. xvi, 5-25, 5-49, and 7-1,

Under CWA section 303(c), states and authorized tribes must adopt water quality criteria that protect designated uses. Nevada's 2008-2010 Water Quality Integrated Report states:

> *"Fish consumption is not a beneficial use cited in NAC 445A.120, although, it is protected through the narrative standards, 445A.121:*
>
> (4) *Waters must be free from high temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances attributable to domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water... "* (See Nevada's 2008-2010 Water Quality Integrated Report, pg 25.)

EPA recommended that the 2001 methyl mercury criterion be used in establishing or updating water quality standards for waters of the United States as part of the triennial review of standards to fulfill the requirements of CWA section 303(c)(2)(B) and 40 CFR part 131, and in issuing fish and shellfish consumption advisories. States and authorized tribes remain free to not use or to adjust EPA's recommended criterion, provided that their water quality criteria for methyl

mercury protect the designated uses and be based on a scientifically defensible methodology, considering bioaccumulation and local or statewide fish consumption (EPA 2010).

EPA guidance on how states and authorized tribes may comply with CWA section 303(c)(2)(B) (EPA 1994) provides three options for compliance:

- Option 1: States and authorized tribes may adopt statewide or reservation-wide numeric chemical-specific criteria for all toxic pollutants for which EPA has issued CWA section 304(a) criteria guidance.
- Option 2: States and authorized tribes may adopt numeric chemical-specific criteria for those stream segments where the state or tribe determines that the priority toxic pollutants for which EPA has issued CWA section 304(a) criteria guidance are present and can reasonably be expected to interfere with designated uses (e.g., a designated use of "fishing" is interfered with by nonattainment of the mercury water quality criterion).
- Option 3: States or authorized tribes may adopt a chemical-specific translator procedure that can be used to develop numeric criteria as needed.

As part of the three year review of standards required by Clean Water Act section 303(c), EPA expects states and authorized tribes to include new or revised criteria for methyl mercury in their waters. (EPA 2010)

Nevada has not adopted EPA's recommended criterion of 0.3 mg methyl mercury/kg fish tissue; nor has it adopted a scientifically defensible alternative methodology, considering bioaccumulation and local or statewide fish consumption, that EPA has approved as a water quality standard under CWA section 303. Accordingly, EPA used the narrative water quality standard for toxicity in NAC 445A.121 to determine if water quality standards are being implemented in the added waters. After comparing (a) fish tissue concentration data for methyl mercury in fish taken from the added waters with (b) the criterion for methyl mercury published under CWA section 304(a), EPA concludes that the narrative standard is not being met. Table 1, below, identifies the fish species in each of the added waters for which the average concentration of methyl mercury exceeds 0.3 mg/kg of fish tissue. Each of the species identified are either classified as game fish pursuant to NAC 503.060, or are Wiper or Carp. EPA notes that Nevada Department of Wildlife's web pages on fishing, including the "Where to Fish" web page, include Wiper and Carp on lists of waters with species-specific consumption advisories.

2. *NSHD fish consumption advisories based on the FDA fish tissue mercury action level*

Nevada's State Health Division (NSHD) issues consumption advisories based on the 1979 U.S. Food and Drug Administration (FDA) fish tissue mercury action level of 1.0 mg methyl mercury/kg wet weight fish tissue, developed for human consumption of commercial fish.

> *"FDA based its action level on the lowest level at which adverse effects were found to occur in adults. ...FDA toxicologists are developing a more complete database for addressing low-level methyl mercury exposures from fish; however they consider the 1 ppm limit to provide an adequate margin of safety. This doesn't mean that it is safe to regularly and frequently eat fish that contain 1 ppm methyl mercury."* (FDA, 1995)

EPA and FDA have agreed that the use of FDA action levels for the purposes of making local advisory determinations is inappropriate.

> *An FDA action level is "an administrative guideline or instruction to the agency field unit that defines the extent of contamination at which FDA may regard food as adulterated. An action level represents the limit at or above which FDA may take legal action to remove products from the marketplace.*
>
> *The methodology used by FDA in establishing action levels or tolerances is to determine the health risks of chemical contaminants in fish and shellfish that are bought and sold in interstate commerce rather than in locally harvested fish and shellfish (Bolger et al., 1990). FDA action levels and tolerances are indicators of chemical residue levels in fish and shellfish that should not be exceeded for the general population who consume fish and shellfish typically purchased in supermarkets or fish markets that sell products that are harvested from a wide geographic area, including imported fish and shellfish products. However, the underlying assumptions used in the FDA methodology were never intended to be protective of recreational, tribal, ethnic, and subsistence fishers who typically consume larger quantities of fish than the general population and often harvest the fish and shellfish they consume from the same local waterbodies repeatedly over many years."* (EPA 2000).

The practice of using FDA action levels for the purposes of making local advisory determinations has been discouraged by EPA and FDA in favor of EPA's risk-based approach to derive local fish consumption advisories. (EPA 2000)

EPA does not agree that reliance on the FDA's 1979 fish tissue action level is sufficiently protective of consumers of fish from local water bodies.

Final List of water body-pollutant combinations added to Nevada's list of water quality limited segments still requiring a TMDL

Table 1, below, presents the final list of water body-pollutant combinations that EPA is adding to Nevada's list of water quality limited segments still requiring a TMDL pursuant to Clean Water Act, section 303(d) and 40 CFR 130.7(d)(2). All 19 water body-pollutant combinations

identified in EPA's February 1, 2013 letter remain. However, two water body IDs have been modified in order to distinguish the added lake/reservoir portion of the water body segment from adjacent stream sections of the water body segment; these are:

- Jakes Creek Reservoir (modified from NV03-SR-53_00 to NV03-SR-53_01), and
- Overland Lake (modified from NV10-CE-76_00 to NV10-CE-76_01).

Table 1: EPA's Additions to Nevada's 2008-2010 Section 303(d) List of Water Quality Limited Segments Still Requiring Total Maximum Daily Loads for mercury in fish tissue

Water Body Name	Water body ID	EPA Assessment Summary
Jakes Creek Reservoir	NV03-SR-53_01	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Largemouth bass.
Overland Lake – Ruby Mountains	NV10-CE-76_01	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Brook Trout
Owyhee River East Fork - Upper	NV03-OW-18	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Yellow Perch.
Owyhee River South Fork	NV03-OW-27	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Smallmouth Bass
Wildhorse Reservoir	NV03-OW-25-B	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Smallmouth Bass, Channel Catfish, Yellow Perch, Wiper, and Tui Chub
Ruby Lake NWR	NV10-CE-26-B	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Largemouth Bass; and Rainbow Trout had an average concentration of 0.3 (n=5).
Warm Spring Pond – Independence Valley	NV10-CE-87_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Bluegill Sunfish and Largemouth Bass.
Barth Pit – Near Humboldt River	NV04-HR-03_01	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Bluegill Sunfish, Smallmouth Bass, and Green Sunfish.
Humboldt River	NV04-HR-02_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Smallmouth Bass and Sunfish, as well as Fathead Minnow, Lahontan Redside, and Tahoe Sucker.
Humboldt River above Rye Patch Reservoir	NV04-HR-05_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Common Carp.
Humboldt River below Rye Patch Reservoir	NV04-HR-06_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Common Carp.
South Fork Reservoir	NV04-SF-82_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Smallmouth Bass and Tui Chub
Echo Canyon Reservoir (Echo Valley Reservoir)	NV13-CL-25-C_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Largemouth Bass.
Nesbitt Lake	NV13-CL-21-C_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Largemouth Bass.
Bodie Creek	NV09-WR-21_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Rainbow Trout.

Water Body Name	Water body ID	EPA Assessment Summary
Carson River from Mexican Ditch Gage to New Empire	NV08-CR-09_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Green Sunfish.
Little Humboldt River – North Fork	NV04-LH-46-B_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Brown Trout.
Rough Creek	NV09-WR-19_00	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Rainbow Trout, Mountain Sucker, Tahoe Sucker, and Speckled Dace.
Walker River East (includes the Elbow, Racoon Beach and Rosachi Ranch)	NV09-WR-07	Average concentration exceeded 0.3 mg methyl mercury/kg fish tissue in Rainbow Trout.

References

EPA's Partial Approval Partial Disapproval

EPA 2010. EPA's Partial Approval and Partial Disapproval Letter and Enclosure for Nevada's 2008-2010 Section 303(d) List to John Heggeness, NDEP from John Kemmerer, Acting Director, Water Division EPA Region 9. February 1, 2013.

Submittal

Nevada Division of Environmental Protection, 2012. Transmittal of the 2008-2010 Water Quality Integrated Report. Letter to Susan Keydel, USEPA and supporting materials, including the Integrated Report, and responsiveness summary, dated December 6, 2012.

Other Documents

40 CFR Part 130 Water Quality Planning and Management.

EPA 1978. December 28, 1978 Federal Register Notice, Total Maximum Daily Loads Under Clean Water Act, finalizing EPA's identification of pollutants suitable for TMDL calculations, 43 Fed. Reg. 60662.

EPA 1985. January 11, 1985 Federal Register Notice, 40 CFR Parts 35 and 130, Water Quality Planning and Management: Final Rule, 50 Fed. Reg. 1774.

EPA 1991. Guidance for Water Quality Based Decisions: The TMDL Process. EPA 440/4-91-001

EPA 1994. *Water Quality Standards Handbook: Second Edition,* (EPA-823-B-12-002; March 2012). http://water.epa.gov/scitech/swguidance/standards/handbook/index.cfm

EPA 2000. *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories Volume 2: Risk Assessment and Fish Consumption Limits Third Edition.* EPA 823-B-00-008; November 2000.
http://water.epa.gov/scitech/swguidance/fishshellfish/techguidance/risk/upload/2009_04_23_fish_advice_volume2_v2cover.pdf

EPA, 2001a. 2002 Integrated Water Quality Monitoring and Assessment Report Guidance, Robert H. Wayland III, Director, Office of Wetlands, Oceans and Watersheds, November 19, 2001.

EPA. 2001b. Water Quality Criterion for the Protection of Human Health: Methylmercury. Final. EPA-823-R-01-001. January 2001.
http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/methylmercury/upload/2009_01_15_criteria_methylmercury_mercury-criterion.pdf

EPA, 2001c. Human Health Criteria - Methylmercury Fish Tissue Criterion Fact Sheet; January 2001.
http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/methylmercury/factsheet.cfm

EPA, 2003. Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act; TMDL-01-03, Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, July 21, 2003.

EPA, 2005. Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act. Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, July 29, 2005.

EPA, 2006. Information Concerning 2008 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions. Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, October 12, 2006.

EPA, 2009. Information Concerning 2010 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions. Suzanne Schwartz, Director, Office of Wetlands, Oceans and Watersheds, May 5, 2009.

EPA. 2010. Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion. EPA 823-R-10-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.

FDA. 1995. FDA Fact Sheet "Mercury in Fish: Cause For Concern?" Revised May 1995.
http://www.fda.gov/OHRMS/DOCKETS/ac/02/briefing/3872_Advisory%207.pdf

Nevada Department of Wildlife. Fishing in Nevada Webpage, accessed on December 12, 2012.
http://www.ndow.org/Fish/